

# You Can Meet the Nutrition Goals in a Variety of Ways



Chapter 1

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# You Can Meet the Nutrition Goals In a Variety of Ways

Since the early days, the school meals programs have been aimed at safeguarding children's health and well-being. USDA's *School Meals Initiative for Healthy Children* reinforces this goal by:

- establishing specific nutrition goals for school breakfasts and school lunches
- making available some additional menu planning alternatives to help you meet these nutrition goals

In this chapter, we'll take a general look at the menu planning systems USDA has established, including the Traditional approach. We'll see what the alternative approaches have in common with the Traditional system and what they offer that's new. In later chapters, we'll focus on how each system works and the steps you will use to plan a typical menu.

Throughout, we'll keep in mind the nutrition goals established by USDA's *School Meals Initiative for Healthy Children*. These nutrition goals are based on:

- the Recommended Dietary Allowances
- children's calorie (energy) requirements
- the recommendations of the Dietary Guidelines for Americans

You will find important information on the nutrition goals and the basis for them in this chapter. If you are interested in the exact wording of these goals in the rule USDA issued in June 1995, see the *Federal Register*, Volume 60, Number 113.

## Choosing the Menu Planning System That's Right for You

- **It's a good idea to consider the merits of each before making up your mind. Here's an overview:**

Schools have traditionally used a Food-Based Menu Planning system that requires specific food components be served in certain amounts.

With this system, you have worked with four components — Meat/Meat Alternate, Grains/Breads, Vegetables/Fruits, and Milk — and two established age/grade groups for lunch (specifically, one for Grades K through 3, another for Grades 4 through 12). There's also been an optional age/grade group (for Grades 7 through 12), and your school may have chosen to use this as well.



The Traditional Food-Based Menu Planning system remains one of your options and you may continue to use this system and the customary age/grade group (or groups). However, you may find that one of the alternative menu planning systems helps you to target meals more closely to the needs of the children you serve.

The alternative menu planning systems have been specifically designed to provide optional ways for you to create menus consistent with the nutrition goals and nutrient standards. These systems will help you:

- provide adequate calories, nutrients, and dietary fiber for a specific age group
- reduce or limit fat, saturated fat, and cholesterol

Remember that the nutrition goals — *and* the nutrient standards designed to achieve these goals — apply to all menu planning systems. As a result, the nutrition goals and nutrient standards will affect the way the state agency monitors your meals for compliance with program requirements. This will be explained in more detail in later chapters.

*We'll examine each of the menu planning systems in detail in subsequent chapters, but first, let's look at:*

- *What the systems are called.*
- *What they have in common with each other and how they differ.*
- *What the nutrition goals are and what they mean for you as a school food service professional.*

## ■ **Traditional Food-Based Menu Planning**

The Traditional Food-Based Menu Planning system requires specific food group components in specific amounts for specific age/grade groups. It is the plan that schools have used since the National School Lunch Program was established in 1946 and the School Breakfast Program in 1966.

This approach uses **meal patterns** that were designed to provide over time:

- 1/3 of the Recommended Dietary Allowances (RDA) for key nutrients for specific age/grade groups for lunch
- 1/4 of the RDA for key nutrients for specific age/grade groups for breakfast

Because this system was designed before the Dietary Guidelines became part of school meal requirements, the meal plans do not have any *built-in* features that will help you serve meals that comply with these guidelines. You will need to give extra thought to planning meals that meet the nutrition goals — including target calorie levels — while reducing fat.



### ■ **Enhanced Food-Based Menu Planning**

Enhanced Food-Based Menu Planning is similar to the Traditional system — it requires specific food group components in specific amounts. However, there are *different* established age/grade groups. And, there are increased servings of Vegetables/Fruits and Grains/Breads. This approach uses **meal patterns** designed to:

- provide 1/3 of the RDA for key nutrients as well as 1/3 of calorie needs for specific age/grade groups for lunch
- provide 1/4 of the RDA for key nutrients as well as 1/4 of calorie needs for specific age/grade groups for breakfast
- help ensure consistency with the Dietary Guidelines

### ■ **Nutrient Standard Menu Planning (NSMP)**

NSMP takes a Nutrient-Based approach to menu planning. Instead of working with specific food components in specific amounts, the menu planner works with menu items. This approach requires a nutritional analysis of foods used in school meals. To do this, schools must use USDA-approved computer software that's widely available and easy to follow. When averaged over a school week, the **menu nutrient analysis** must:

- provide 1/3 of the RDA for specific nutrients as well as 1/3 of calorie needs for each age or grade group for lunch
- provide 1/4 of the RDA for specific nutrients as well 1/4 of calorie needs for each age or grade group for breakfast
- meet certain standards which help ensure that meals are consistent with the Dietary Guidelines for Americans

What about age/grade groups for NSMP? Here you have some extra choices. You can use the same age/grade groups as used for Enhanced Food-Based Menu Planning. Or, you can use the computer software to customize optional age groups.

### ■ **Assisted NSMP**

Assisted NSMP is exactly like NSMP *except* an outside consultant or other agency performs all of the functions of menu planning and nutrient analysis. If you do not have computer technology that will allow you to use NSMP, you may wish to choose Assisted NSMP. If computers become available, you can easily switch to NSMP.

USDA has published a comprehensive guide to help schools put together a menu planning system using Assisted NSMP. The guide contains cycle menus, recipes with nutrient analysis, food specifications, production records, and other helpful material. See Appendix 3 for more information.





## You Are Working Toward Specific Nutrition Goals

■ No matter which menu planning option you choose, as a result of the *School Meals Initiative for Healthy Children*, you are now working toward meeting more specific nutrition goals than you have in the past. These are:

- **Recommended Dietary Allowances (RDA)**
  - 1/3 RDA for lunch
  - 1/4 RDA for breakfast
  - Age appropriate
- **Calorie Goals**
  - Age appropriate
- **Dietary Guidelines for Americans**

**What does this mean for you?** For many years, you have worked with lunch and breakfast meal patterns designed to provide a certain percentage of RDA for key nutrients. As you worked with these patterns, you did not have to be concerned with specific targets for individual nutrients — in fact, the program set no targets. And, equally important, there were no targets set for calories.

The *School Meals Initiative for Healthy Children* has changed this. There are now nutrient standards for school lunch and school breakfast menus. These nutrient standards establish the required level of calories and key nutrients to meet the nutrition goals for specific age or grade groups of children.

In other words, regardless of the menu planning option you follow, your breakfast and lunch menus, when averaged over a school week, should meet the nutrient standards for the selected age or grade group.

The nutrient standards for grades and ages are the same for Enhanced Food-Based Menu Planning, NSMP, and Assisted NSMP. With NSMP and Assisted NSMP, you have the extra flexibility of customizing age groups. Customizing age groups will allow you to know and provide the nutrients and calories that most closely meet the physiological needs of the children you serve.



### ***A Closer Look at the Nutrient Standards***

The nutrient standards for healthy school meals were established by averaging the Recommended Dietary Allowances (RDA) for key nutrients for different groups of children. The standards were set using the RDA because these are the best estimate of how much of a nutrient is required to adequately meet the known nutrient needs of practically all healthy people. Foods that naturally contain these nutrients also typically contain other essential nutrients not specified in the nutrient standards.

■ ■ ■ ■ ■ ■ ■ ■ The nutrient standards set target goals for the following:

- Calories
- Protein
- Calcium
- Vitamin A
- Iron
- Vitamin C

■ ■ ■ ■ ■ ■ ■ ■ Also, in keeping with the recommendations of the Dietary Guidelines, the nutrient standards set target goals for fat. These are:

- No more than 30 percent of calories from fat.
- Less than 10 percent of calories from saturated fat. Keep in mind that the percent of calories from saturated fat is part of the percent of calories from total fat.

■ ■ ■ ■ ■ ■ ■ ■ The nutrient standards do not set *specific* target goals for cholesterol, sodium, and dietary fiber. However, you will need to pay attention to these nutrients and dietary components.

In keeping with the *School Meals Initiative for Healthy Children*, your goal is to work to *reduce* cholesterol and sodium and *increase* dietary fiber.



## WHY THE NUTRITION GOALS ARE IMPORTANT...

■ Here's more information on the nutrition goals and the basis for them:



The *School Meals Initiative for Healthy Children* established specific nutrition goals for school breakfasts as well as school lunches. These nutrition goals are aimed at...

- providing adequate calories and nutrients for specific age groups
- while reducing fat and saturated fat to recommended levels.

These goals are based on...

- the Recommended Dietary Allowances (RDA)
- children's calorie (energy) requirements
- the Dietary Guidelines for Americans

We'll look at each of these on the following pages, but first some background.

### Why is nutrition so important?

We all know generally what nutrition is. It's the process by which our bodies take in and use food. But why is it so important? What does good nutrition provide?

Good nutrition provides the calories we need for energy and the nutrients essential for...

- proper growth, repair, and maintenance of body tissues
- resistance to disease and infection
- prevention of deficiencies that lead to problems such as anemia, goiter, scurvy, and rickets



In recent decades, medical researchers have found that good nutrition can also help reduce the risks of coronary heart disease and certain types of cancer.

In short, while we can sometimes *get by* with less than an optimum diet, to *thrive* we need a healthy diet. A healthy diet provides...

- essential nutrients and energy to prevent nutritional deficiencies and excesses
- the right balance of carbohydrate, fat, and protein to reduce risks for chronic disease
- a variety of foods including plenty of grains, vegetables, and fruits





## Start With the Dietary Guidelines for Americans... End Up With Healthier Meals!

The best way to provide healthier food choices in school meals is to apply the core messages of the Dietary Guidelines for Americans to your menus and food items. In fact, the Dietary Guidelines are an important starting point for the nutrition goals set by the *School Meals Initiative for Healthy Children*.

### What exactly are the Dietary Guidelines for Americans?

The Dietary Guidelines are a set of recommendations designed for healthy Americans age 2 years and older. They answer the basic question, "How should Americans eat to stay healthy?" They reflect the best available scientific and medical knowledge about food choices that promote health and help prevent chronic diseases.

The Dietary Guidelines are published jointly by the U.S. Department of Agriculture and the U.S. Department of Health and Human Services. Every 5 years, as required by law, the guidelines are reviewed by a panel of experts to determine whether the existing standards should be altered and, if so, to recommend changes.

### What do the Dietary Guidelines recommend?

*Nutrition and Your Health: Dietary Guidelines for Americans* (Fourth Edition, 1995) contains seven core recommendations. These are:

1. **Eat a variety of foods.**
2. **Balance the food you eat with physical activity — maintain or improve your weight.**
3. **Choose a diet with plenty of grain products, vegetables, and fruits.**
4. **Choose a diet low in fat, saturated fat, and cholesterol.**
5. **Choose a diet moderate in sugars.**
6. **Choose a diet moderate in salt and sodium.**
7. **If you drink alcoholic beverages, do so in moderation.**

Following the Dietary Guidelines is a great way to obtain the nutrients we need, have healthier and more active lives, and reduce the risk of chronic disease.

It's important to remember that these guidelines are meant to be applied to a diet over a period of time, not to one food or one meal. They call for moderation and the avoidance of extremes in the diet.

*On pages 9 through 15 is more information on each of the Dietary Guidelines, along with some general menu planning tips for implementing them. You will find more specific tips for breakfast on pages 102 through 107 and for lunch on pages 108 through 113.*



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## DIETARY GUIDELINE #1: *Eat a variety of foods.*

This guideline is the cornerstone for building a healthy diet. Foods contain combinations of nutrients and other healthful substances. *No one food provides all the nutrients needed for good health.*

To make sure we eat all of the nutrients and other substances needed for health, we need to choose a variety of foods. There are no “good” or “bad” foods. All foods can be part of a healthful diet if balance is achieved.

A healthful diet contains the amounts of essential nutrients and energy needed to prevent nutritional deficiencies and excesses. It also provides the right balance of carbohydrate, fat, and protein to reduce risks for chronic disease. It can be obtained from a variety of foods that are available, affordable, and enjoyable.

**Just how important is getting essential nutrients?** A look at just two nutrients — calcium and iron — will give you a clue.

**Calcium** is an important mineral needed for healthy bones throughout life. It is essential to the development of sufficient bone mass during the growing years. Prevention of osteoporosis in later years is critically dependent on calcium intake during adolescence and young adulthood. Nearly half of the adult skeletal mass is developed during adolescence.

Many Americans, including teenage girls and older women, do not consume calcium in adequate amounts. There is a common misperception that milk and dairy products — the richest sources of dietary calcium — are fattening. However, by selecting lowfat or fat-free dairy items and other lowfat calcium sources, children and adults can obtain adequate calcium without getting too much fat.

**Iron** is a critically important nutrient that functions in the red blood cells to carry oxygen. It is another nutrient that many children do not consume in adequate amounts.

Iron-deficiency anemia directly impacts a child’s readiness to learn. Children and youth with anemia usually are less attentive than their classmates and may fall seriously behind. Nutrition is clearly a significant factor in a child’s short- and long-term readiness to learn.

Health professionals recommend that children get their iron through a variety of iron-rich foods, such as lean meat, cooked dry beans and lentils, leafy green vegetables, whole grains and fortified cereals. In addition, to help improve iron absorption, vitamin C-rich foods (such as citrus fruits and strawberries) should be eaten with foods high in iron.



**As you plan school meals for children, keep in mind that it's important to obtain nutrients from a variety of foods, *not* from a few highly fortified foods or supplements. This is because:**

- Just as children need nutrients for growth and health, they also need energy. Serving a variety of foods is the best way to provide children with adequate calories as well as nutrients.
- Relying on fortified foods or supplements may limit the nutrients in meals served to children.
- There are some nutrients for which requirements and functions have not yet been established, even though our bodies need and use them. A varied diet will help avoid shortages of these nutrients as well as others.





### **MENU TIPS FOR VARIETY:**

#### **Entrees:**

Plan a different meat or meat alternate or a different combination of meat or meat alternates for each day in the week.

Follow a plan for providing a good variety of meats and meat alternates in main dishes.

#### **Vegetables and Fruits:**

Include raw or cooked vegetables in salads.

Plan to use raw or cooked fruits in fruit cups and desserts.

Use a different combination of two or more servings of vegetables and fruits each day. Include all forms — fresh, canned, frozen, and dried.

#### **Grains and Breads**

Plan to use a different kind of bread or bread alternate each day.

Include a variety of enriched rice, macaroni, noodles, and other pasta products.

Offer school-made loaf breads or hot breads, such as rolls, sandwich buns, muffins, biscuits, or cornbread as often as possible.

Look for more opportunities to use whole grains in your recipes and menus.

### **DIETARY GUIDELINE #2:**

**Balance the food you eat with physical activity — maintain or improve your weight.**

Children need enough food for proper growth and normal development. Calorie needs of children differ due to body size, growth spurts, and varying levels of physical activity.

Obesity in childhood is a growing problem in our nation. A poor diet and a sedentary lifestyle are the major contributors. Health professionals recommend that childhood obesity be prevented by increasing physical activity. They also recommend teaching children to eat grains, vegetables, fruits, as well as lowfat dairy and other protein-rich foods.

### **MENU TIPS FOR MAINTAINING HEALTHY WEIGHT**

Serve plenty of vegetables and fruits.

Serve more pasta, rice, breads, and cereals without fats and sugars added in preparation or at the table.

Serve less fat and fewer high-fat foods.

Serve desserts and sweets in moderation.



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**DIETARY GUIDELINE #3:****Choose a diet with plenty of grain products, vegetables, and fruits.**

Most of the calories in a diet should come from grain products, vegetables, and fruits. These foods provide vitamins, minerals, complex carbohydrates (starch and dietary fiber), and other substances that are important for good health. They are usually low in fat, depending on how they are prepared.

Researchers continue to study the role of fiber in healthy diets and in decreasing the risk of chronic diseases. Some of the benefits associated with a high-fiber diet come from other components present in these foods, not just from fiber itself. Therefore, fiber is best obtained from foods rather than supplements.

***MENU PLANNING TIPS FOR INCREASING GRAINS, VEGETABLES, AND FRUITS*****Side Dishes**

Offer vegetables higher in fiber such as cooked dry beans, broccoli, tomatoes, leafy greens, potatoes with skin, and carrots.

Offer raw vegetable salads.

Offer vegetarian baked beans.

Offer whole or cut-up fresh fruits higher in fiber such as those with edible skins — apples, pears, nectarines, peaches — and those with edible seeds such as berries and bananas.

**Grains**

Offer quick breads, muffins, crackers, or cookies made with whole grains or whole-grain flours (examples of whole-grain flours are masa, whole-wheat flour, oats, bulgur, and barley).

Serve a variety of pasta salads.

Offer whole-grain breads and cereals at breakfast and for snacks.

Gradually modify recipes to include increasing amounts of whole grains or whole-grain flours.

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**DIETARY GUIDELINE #4:****Choose a diet low in fat, saturated fat, and cholesterol.**

In general, health professionals believe that food habits established in childhood are important in preventing heart disease later in life. They recommend reducing the risk of heart disease by decreasing the amount of total fat, saturated fat, and cholesterol in the diet.





Changes to reduce the amount and type of fat in meals must be practical and acceptable. Children over the age of 2 years should gradually adopt a diet that, by about 5 years of age, contains no more than 30 percent of calories from fat.

As children begin to consume fewer calories from fat, they should replace these calories by eating more grain products, vegetables, fruits, and lowfat dairy products and other protein-rich foods.

### **MENU PLANNING TIPS FOR REDUCING FAT**

#### **Entrees**

Offer lean meats, fish, poultry, as well as cooked dry beans, dry peas, and lentils. Consider serving dishes that combine meat or meat alternate with grains — beans and rice, for example.

Choose entrees without added fat.

#### **Side Dishes**

Offer reduced-fat or nonfat salad dressings. Balance higher fat foods in menus with items lower in fat. For example, with chicken nuggets serve baked potatoes or steamed fresh vegetables rather than French fries.

#### **Grains**

Provide a selection of lower fat grain products such as bagels, English muffins, and pita bread.

Serve jam, jelly, or honey on bread and rolls in place of high fat spreads.

Increase the variety of lowfat grain products such as noodles, brown rice, barley, and bulgur.

#### **Milk Choices**

Encourage choices that are lower in fat. Offer lowfat (such as 1 percent) and fat-free (skim) milk to help decrease the fat content of meals.



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**DIETARY GUIDELINE #5:**  
**Choose a diet moderate in sugars.**

Offer and use sugars in moderation. Sugar and high-sugar foods supply calories but may be limited in nutrients like vitamins and minerals.

Sugar comes in many forms, including: table sugar; brown sugar; raw sugar; honey; syrups; corn sweetener; high-fructose corn syrup; molasses; and fruit juice concentrates. Sugar is present in milk as lactose.

**MENU PLANNING TIPS FOR MODERATING SUGAR**

Use fruits packed in light syrup or juice. These will be sweet, so there's no need to add extra sugar.

Offer grain-based desserts made with whole grains or whole-grain flour. Add fruits, vegetables, and nuts for added flavor and texture.

Use fresh or frozen fruit desserts.

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**DIETARY GUIDELINE #6:**  
**Choose a diet moderate in salt and sodium.**

Sodium occurs naturally in foods, usually in small amounts. Most Americans eat more sodium chloride (known commonly as salt) and sodium than they need. Most of this excess comes from processed foods rather than from salt added in cooking or at the table.

Sodium is associated with high blood pressure. Some studies show that consuming less salt or sodium may lower the risk for high blood pressure in certain population groups. When children learn to enjoy meals and snacks without excess salt, they may be protecting themselves from future health problems.

**MENU PLANNING TIPS FOR REDUCING SALT AND SODIUM****Entrees**

When serving ready-made foods, especially processed products, check the sodium content and select foods that have less — for example, those using herbs and spices.

When preparing foods, use lower sodium products. Review recipes for ways to reduce sodium, such as substituting herbs and spices for salt.

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**Side Dishes and Grains**

When serving salted snacks such as crackers, pretzels, or nuts, offer them in smaller amounts.

Serve smaller amounts of condiments such as mustard, catsup, relish, and salad dressing.

Offer salt-free seasonings as an alternative to the salt shaker.

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**DIETARY GUIDELINE #7:****If you drink alcoholic beverages, do so in moderation.**

Children and teens should not drink alcoholic beverages. Use of alcoholic beverages involves risks to health and other serious problems.

Support school programs that encourage children to choose a drug-free and alcohol-free lifestyle. Use health fairs to promote these programs along with good eating habits.

**PUTTING IT ALL TOGETHER...**

Simple changes, taken one at a time, can add up to a lifetime of better eating habits. The key is to make changes that are right for you and your customers.

Here are some techniques that can help you apply the Dietary Guidelines for Americans to your menus:

- Remember that children are the prime focus.
- Make gradual changes over time.
- Provide tasty and interesting food choices.

For best results, integrate the food service program with the entire school:

- Promote the program in the school and with parents in the community.
- Work closely with teachers to coordinate nutrition education in the classroom and cafeteria.
- Enlist the support of administrators and boards of education to develop policies that support healthy eating.
- Set small goals and achieve them—success promotes success.



***The Food Guide Pyramid:  
A Great Tool for  
Planning Menus  
And for Teaching Kids***

The Food Guide Pyramid is a visual representation of the recommendations contained in the Dietary Guidelines for Americans. It's a simple and effective tool that's easy for even young children to understand.



The Dietary Guidelines emphasize the importance of eating a variety of foods. The Pyramid reflects this, showing that a healthy diet includes many different foods.

Looking at the Pyramid, we can see that grains and breads should be used as the foundation of the meal. The second largest component should be vegetables and fruits.





## Maintaining Calories While Reducing Fat

Most Americans are familiar with calories. In fact, counting calories is something many of us do routinely as we try to maintain a healthy weight. But what exactly is a calorie? One dictionary defines the word this way: *a unit used for measuring the energy produced by food when oxidized in the body.*

### What's important to know about calories?

#### 1) Different foods provide different amounts of energy.

For example, 1 gram of protein has 4 calories. So does 1 gram of carbohydrate. In contrast, 1 gram of fat has 9 calories, making fat a more concentrated source of calories.

It can be a challenge to get the appropriate amount of calories for our age, size, and activity level — and get those calories from a variety of nourishing foods without too much fat. But this is one of the health recommendations of the Dietary Guidelines for Americans.

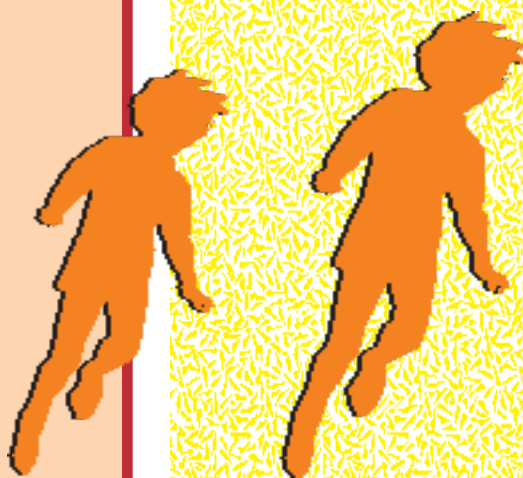
Thanks to the nutrition information that's now available on many food labels, we can know at a glance how many calories a serving of a particular item will give us. We can also see what percentage of those calories come from fat.

#### 2) Adequate calories are important to children's health. Calorie levels are now part of school meal requirements for breakfast and lunch.

While many adults worry about getting too many calories, menu planners need to be careful to make sure children get enough calories. This is why the *School Meals Initiative for Healthy Children* sets specific calorie goals for breakfast as well as lunch.

Children and teens are growing rapidly. They need plenty of energy — not only for physical activity, but for proper growth and development as well. Their calorie and nutrient needs are determined not only by age and activity but also by size.

Between the ages of 2 and 9 years, a typical child will gain about 4 to 5 pounds per year. The average teenage boy will have his greatest growth from ages 12 through 16 years, during which time he may add approximately 12 inches in height and 50 to 60 pounds in weight. A teenager participating in a competitive sport needs more than 3,000 calories per day.





**3) There is a substantial increase in nutrient and calorie needs of children between the ages of 10 and 11 years old.**

As a result, students in Grades 7-12 *will not* have their calorie and nutrient needs met by menus planned for Grades K-6. This is very important to keep in mind as you select age and grade groups and plan meals to reflect the structure of your school(s).

**4) As we make an effort to meet the Dietary Guidelines, we must replace the calories lost from reducing fat with calories from foods that are lower in fat, especially grain products, vegetables, and fruits.**

Each of the newer, alternative menu planning systems — Enhanced Food-Based, Nutrient Standard Menu Planning (NSMP) and Assisted Nutrient Standard Menu Planning (Assisted NSMP) — have built-in methods to ensure that calorie needs for energy and growth are met as fat and saturated fat are reduced.

The Enhanced Food-Based Menu Planning system requires increased amounts of grains, vegetables, and fruits.

NSMP and Assisted NSMP require meeting specific age-related calorie goals as measured through the menu nutrient analysis.

The Traditional Food-Based Menu Planning system does not have any built-in features to accomplish this goal. As a result, schools selecting the Traditional meal pattern must be careful to replace the calories lost from reducing total fat.